

## CARE OF THE TEETH

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A NEW era is upon us, that of sanitary mouths. Prevention of dental decay means prevention of disease, not only of the mouth, but many times of the body as well. This is to be accomplished by a system of prophylaxis, which, when once understood by the laity at large, will cause a shrinkage in the sick lists that will prove amazing.

Many of us think we understand how to brush and clean our teeth, but do we? If so, do we take proper care of our mouths?

The pathological effect upon the system of decomposing food in the mouth is just being realized by the medical profession. This statement is not intended to refer to filthy mouths, as the cause of systemic disturbances in such cases has been so apparent that diagnosis was comparatively simple. I refer to those mouths taken care of in a half hearted, disinterested way. Possibly one brushing a day suffices, the breakfast remaining on the teeth until the brushing at bedtime. It is in people with such mouths that systemic disorders have developed, so subtle in their nature that the physician has been baffled to find the reason for such disturbances.

Bacteria of food debris would be quite harmless in the mouth by themselves. Nearly all germ life, in order to become aggressive and virulent, must have a pabulum on which to thrive. This has been demonstrated so often that it needs no argument. It is also a well known fact that the disintegration or decomposition of animal matter is due to the action of microörganisms. Much has been done in the way of experiment to devise some means of destroying the microörganisms found in the mouth, or at least of rendering them inert. Innumerable washes have been formulated and tried, but only with small success. If a powerful atomizer containing a good germicide could be used at frequent intervals, it might be possible to accomplish a condition of inactivity and a great lessening in numbers of germs in the mouth. But an outfit to properly do this work is not practical for all to possess. If it is then not practical to sterilize the mouth is there not some way in which the food can be thoroughly removed? It is on this thought that the principles of prophylaxis are based.

In the average mouth of full dentures, it has been estimated that the teeth present a surface of twenty-five square inches. This would mean

that the surface of the teeth are as great as a piece of glass five inches square. Try and estimate the amount of poisonous products that would generate if such a surface were smeared over with various foods from the dining table and these allowed to decompose, and a fair idea may be obtained of the amount of decomposition that is taking place in unsanitary mouths. Nor is this simile forceful enough, for food in the mouth is in one of the most favorable environments known for activity and virulence of germ life, so that the products generated would be far more numerous, more poisonous, and irritating in their action, than such products from food decomposing in the open air.

The constant dropping of water will wear away a stone, and although some constitutions can and do withstand for years, these poisons generated in the mouth and swept into the intestinal tract with every swallow, yet the vast majority feel the ill effects sooner or later.

Unquestionably the improper selection of foods and the abuse of the use of tea and coffee are the foundation of many of our ills, but most stomach and intestinal troubles will eventually be traced back to the mouth.

Chronic headaches, uremia, anemia, neurasthenia, malaise, constipation, dizziness and coughs, have all been helped and in many cases cured, by oral prophylaxis.

Microörganisms acting on the foods, sugars and starches, produce a solvent, lactic acid, which is the primary cause of dental cares. In children and young people, even up to the age of twenty-five and thirty, dental cares and its various complications are practically the only oral pathological conditions which occur. But after thirty years, the decomposed products of food attack new fields—the peridental membrane, the alveolus, and the gums. In a great degree, immunity from dental cares now ensues, and the seat of action is transferred. It becomes a battle between the peridental membrane and the toxins and ptomaines generated around the neck of the teeth, and by the age of forty the food has usually scored several points against its antagonist. Undoubtedly this occurs on account of the gradual change in these tissues, for it is a rare exception to find receding gums in youth. This change, though scarcely perceptible, seems to mark the turning point from about the thirtieth to the thirty-fifth year. The haversian canals slowly begin to contract, lessening the blood supply to the part, the membrane grows thinner, its vitality is lowered, and its resistance lessened. Can this condition of atrophy be prevented and controlled? Apparently in a great measure it can. These tissues are as capable of development and holding a state of perfect health as the muscles of the body. By a systematic exercise, daily

stimulating the gum-surface with the toothbrush, this condition can in a great measure be avoided.

It would hardly be an extravagant statement to say that fully three-quarters of the people having a bad breath could cure it by the faithful use of the toothbrush and floss silk. But we must realize the importance of using the floss and of brushing the teeth at least four times daily.

The vast majority of people have been told by the dentist to brush their teeth twice a day, morning and night, and they consider themselves indeed virtuous who follow this rule with a fair degree of regularity. The breakfast debris stays on the teeth until bedtime, joined by that of lunch and dinner. Even business men or women can find it possible to brush their teeth during the day, and if the habit is once acquired they will be quite miserable if they neglect it. Five brushings a day is the ideal and proper care for every mouth, four will bring very satisfactory results; anything under this number is rather uncertain.

The first thing in the morning the teeth should be thoroughly brushed with tepid water to thoroughly remove the decomposed mucus and saliva produced in the mouth during sleep. After breakfast the food should be removed with the help of a dentifrice. The thorough removal of grease from the teeth is a chemical action, not mechanical, and requires a solvent such as is contained in a dentifrice. After lunch a dentifrice should again be used, and once again at night, just before retiring, if the brushing has been omitted after dinner. The fact is appreciated that care of the teeth cannot be made one's sole object in life, nor all one's spare time be devoted to the mouth, but such duties soon become habits, and as they are based upon common sense, this extra time and effort amount to practically nothing, and will more than compensate for the trouble it involves.

There is but one way of artificially stimulating the deeper tissues around the neck of the teeth, and that is by stimulating the surface of the gums. Therefore it must be remembered that the gums should be brushed inside and out just as thoroughly as the teeth. If we wish to bring the blood to the back of the hand we would not rub the skin with a slow, deliberate stroke, but would use a fast, vigorous one. The toothbrush should be made to travel as fast as the hand can make it go, and in this way the proper stimulus will be imparted to the gums which, in drawing their blood supply from below, will cause a free and plentiful supply to the alveolus and periodontal membrane, and these are the tissues we are after.

With the jaws slightly parted so that there will be room for the toothbrush around the molars, brush the outside surfaces of the teeth

and gums crosswise, then up and down, giving special attention to the last molars. It is not necessary that pressure be used on the gums in brushing, as it will make them sore, so a soft brush is advisable in starting this treatment, at least for the first two weeks. With the brush turned upward, brush the inside of the upper teeth and gums with a forward and back stroke, allowing the brush to travel back and forth across the roof of the mouth, to cleanse this membrane and to stimulate the flow of blood to the small arteries. With every outward stroke the heel of the brush will pass over the inner surfaces of the front teeth. Now invert the brush, and with the thumb held on the top of the handle, instead of around it, brush the inner surfaces of the lower teeth, reaching well down on the gums. Lastly the masticating surfaces on both the upper and lower jaws should be brushed. This system should be repeated at least three times, always with a fast, vigorous stroke, and making sure that the brush is reaching the gums. There are now a part of two surfaces left that have not been reached, the approximal or contact surfaces.

Teeth should be flossed at least once a day, and as the most important brushing is at night, floss the teeth thoroughly the last thing after brushing and then rinse the mouth with water. A waxed ligating silk seems to be about the right size and strength for this purpose. After passing the silk between the teeth, the end held in the mouth should be brought out and the silk pulled out from between the teeth laterally in the form of a loop. This seems to be more effective in cleansing the surface than when the silk is merely snapped out. The question of toothbrushes and dentifrices must be decided individually. By placing a small quantity of powder or paste between the incisors and biting on it, grit can soon be detected. The teeth should be polished daily, not seoured.

We are glad to know that unclean mouths are less common among American people than among those of any other nation. Let the nurse then do what she can to keep her own teeth in a perfect condition and, so far as her profession will permit, to impress others with the necessity of doing the same.

Think what this education would mean in preventing many of the infectious conditions now found and treated by specialists of the throat, nose, and ear; of stomach and intestinal disorders where the products of bacterial digestion in the mouth are being constantly swept into the system. No one would think of eating tainted meat or fish, sour milk, or stale eggs, yet these are but undergoing bacterial digestion, the same that takes place in the mouth improperly cleansed.